

CANADIAN

PACIFIC

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experience are the great requisites in the upon, and to what great extent it is

continuously endeavour to develop and maintain such relationships."

## Canadian Pacific Receiving F1a Locomotives

The Canadian Pacific is now receiving from Canadian Locomotive Co., Kingston, Ont., the 20 4-4-4 locomotives, the ordering of which was mentioned in these columns at the time the order was placed. An illustration of one of these units, no. 2910, is given herewith. The chief dimensions are as follows:—

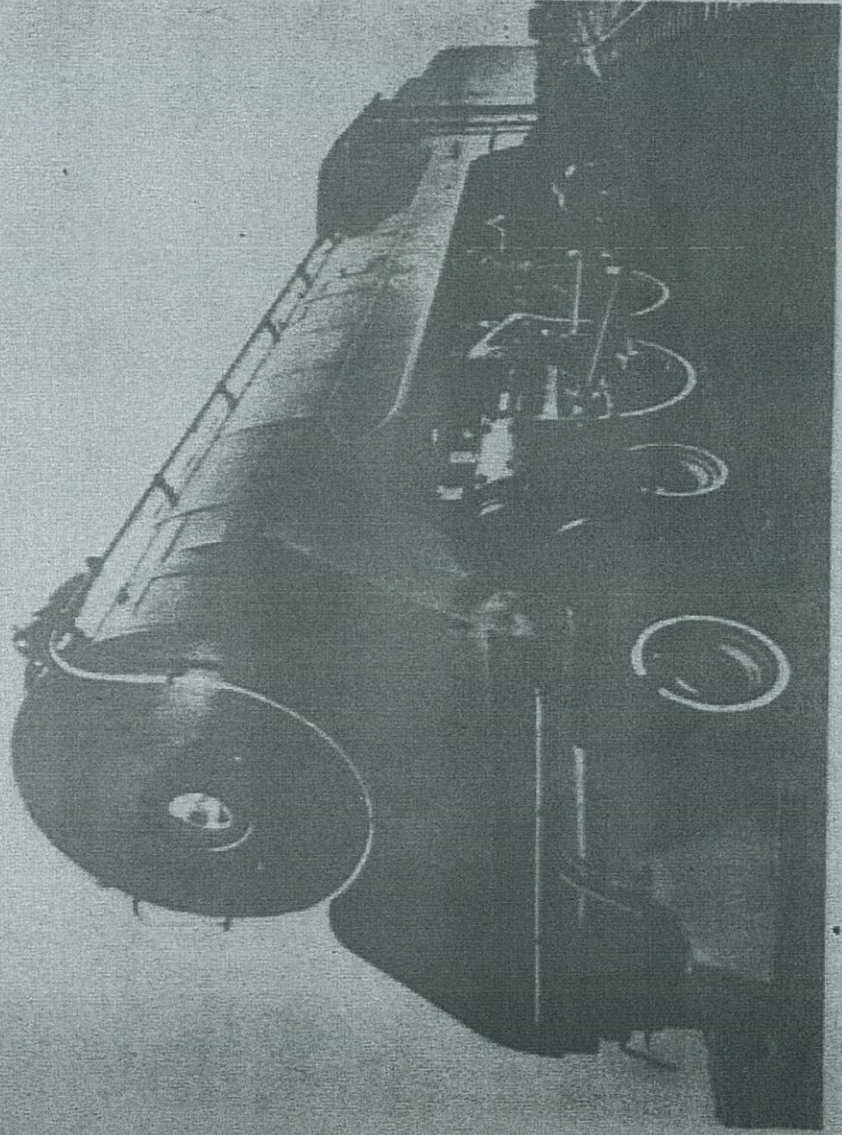
motives were designated as of the F2a class, and, like the 20 now being delivered, have the 4-4-4 wheel arrangement. The F2a locomotives have 80 in. driving wheels, whereas the new ones are equipped with 75 in. wheels. Some preliminary information on the locomotives now being delivered is contained in

locomotives, giving a smooth and modern appearance not unlike that of the latest type of high-speed English engines, and conveying a vivid impression of speed and power. Many interesting mechanical details that have proved successful in recent Canadian Pacific locomotives have been incorporated in the new 2900's.

The development toward smaller locomotives is very evident in the new 2900's, as compared with recent engines constructed by the Canadian Pacific Railway. Last year's "Jubilee" trains set a new mark in the design of modern locomotives in Canada, of which the newest ones are a further example. Taking the engine and tender as a unit, the new ones are approximately five feet shorter, while the estimated light weight is 32,900 pounds less.

The advantage of this is expected to make itself evident in economy of operation and in efficiency, especially when providing power for smaller trains. Special materials have been used to maintain strength with minimum weight. The boiler, for instance, is made of nickel steel, carrying a pressure of 300 pounds per square inch without unduly increasing the weight. The frames are of high tensile nickel cast steel and all main rods and side rods are also of high tensile nickel steel in order to ensure satisfactory service under the difficult conditions met with in handling modern passenger trains.

A change in the attachment of the main rods to main driving wheels of the new locomotive, as compared with last year's "Jubilee" type, will be noted. The driving wheels have been reduced from 80 to 75 inches and have been





Canadian Pacific Railway Semi-streamlined Locomotive, Class F1a.

Boiler pressure	300 lb.
Firebox length and width	93 1/16 x 70 3/16 in.
Tubes, no. and diam.	482 in.
Flues, no. and diam.	116 3/4 in.
Distance between tube sheets	15 ft. 10 3/16 in.
Heating surfaces:	
Tubes and flues	2,091 sq. ft.
Firebox	160 sq. ft.
Arch tubes	31 sq. ft.
Superheating	300 sq. ft.
Combined	3,191 sq. ft.
Gross area	16 1/2 x 28 in.
Cylinder diam. and stroke	7 ft. 2 in.
Diameter of driving wheels	32 ft. 7 in.
Driving wheelbase	64 ft. 9 1/4 in.
Loco. wheelbase	110,000 lb.
Loco. and tender wheelbase	240,000 lb.
Weight on drivers	219,000 lb.
Weight of loco. in working order	184,000 lb.
Weight of tender in working order	90,000 lb.
Weight of tender, light	7,000 Imp. gall.
Tender water capacity	12 tons
Tender coal capacity	26,000 lb.
Loco. tractive effort	

These locomotives, of semi-streamlined form, bear quite a bit of resemblance to the "Jubilee" type locomotives which were introduced by the Canadian Pacific last year, and which were described fully and illustrated in our September, 1935, issue, beginning on pg. 397. However, the 20 new locomotives, designated as of the F1a class, are (taking locomotive and tender as a unit) some 5 ft. shorter than the Jubilee type, and weigh 32,900 lb. less. Last year's Jubilee type loco-

information to hand from the Canadian Pacific Publicity Department, as in the following.

Power, speed, and economy of operation are the main features of 20 new Canadian Pacific Railway locomotives, the first of which has just been brought to Montreal from the Canadian Locomotive Company at Kingston. This order will bring the number of new locomotives bought this year by the Canadian Pacific Railway to a total of 50.

The newest engine combines many of the best features of the successful "Jubilee" or 3000 type and of the newest series of 2800's, 30 of which were produced earlier this year. The new series has been assigned numbers 2910 to 2929 and placed in the F1a class of the company inventory. It is expected that, after exhaustive tests, they will be placed in passenger service.

The appearance of the 20 new locomotives is very smart. H. B. Bowen, Chief of Motive Power and Rolling Stock, has embodied in their design the popular semi-streamlined appearance which he first developed in the "Jubilee" locomotives of last year and also incorporated in the 30 new 2800's built this year. Headlight, smokestack, and domes are merged into the flowing lines of the new

A change in the attachment of the main rods to main driving wheels of the new locomotive, as compared with last year's "Jubilee" type, will be noted. The driving wheels have been reduced from 80 to 75 inches and have been moved closer to the cylinders, permitting attachment of the main rod to the back pair of driving wheels.

Special features include a screw-operated reverse gear, roller bearings on the engine trucks, type "E" superheater with multiple throttle, and Elesco feed water heater. Valve motion is of the Walschaert type, with a valve travel of six and one-half inches.

Toronto Railway Club is to hold its seventh annual dinner at Royal York Hotel, Toronto, Dec. 4. The chief speaker will be S. W. Fairweather, Director, Bureau of Economics, Canadian National Ry., whose subject will be "The Road Ahead". The speaker on behalf of the supply men will be J. B. Carswell, President, Burlington Steel Co. A splendid programme of entertainment has been arranged by the committee under G. Roy Jones, of Canadian Pacific Express Co.—The Club's November meeting, addressed by F. W. Collins, Industrial Agent, C.P.R., Toronto, and S. J. Raymond, Commissioner of Industries, C.N.R., Toronto, was very successful, and was attended by the industrial commissioners of a number of municipalities.—The Club's January meeting will be held at the Royal York Hotel, Toronto, on Jan. 24, and will be addressed by W. J. McGarry, Manager, Open Car Section, Car Service Division, A.A.R.